Case Study: Understanding User Mental Models for Content Storage

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Product Background:

The product team wanted to determine whether to retire or consolidate overlapping content storage experiences. Collections and Plans both served as places to save and organize content but differed in structure and levels of user control.

I reframed the research to focus on understanding user mental models and areas of friction that could inform actionable engineering and design recommendations. The goal was not to prescribe a product decision, but to provide insights that would give product managers and designers a clear view into how users expect to store and manage content.

Research Objectives

- Understand how users expect to store and access saved learning content
- Identify pain points and overlap between Collections and Plans
- Evaluate which features users value most when managing learning content
- Determine whether consolidation would better align with users' mental models
- Identify opportunities to simplify workflows and reduce friction

Methodology:

Study Type
I scoped the work as moderated discovery interviews with a feature ranking activity to help prioritize functionality

Participants
- 12 participants which included AI developers, startup founders, and AI students
- Had previously used Plans or Collections at least once

Research questions
- What aspects of existing content storage experiences do users find more or less useful, and why?
- How do users think about storing and returning to content they want to revisit later?
- How do users understand and navigate having multiple options for saving and storing content?

Approach
- Discovery interviews with guided walkthroughs. Users interacted with each experience through lightweight tasks to ensure feedback was based on firsthand use, not recall or opinion

Key findings:

Users did not meaningfully distinguish between storage experiences by name or intended purpose. Instead, they valued having control over capabilities such as editing, reordering, progress tracking, and sharing.

Having multiple places to save content made it difficult for users to know where content belonged and how to manage it later

Users' mental model for storing content is a single, evolving library they can return to over time similar to how playlists work in Spotify or Apple Music

Report example:

FINDING #12

The flexibility of features such as privacy toggle, and no restrictions on content type was seen as valuable and essential for storing and engaging with learning content

- Users like the ability to easily add any type of content to 'Collections' without restrictions.
- Many expressed a preference to 'Collections' because it was viewed as a more flexible way of learning since it doesn't require start and end dates.
- Users valued the ability to set a 'Collection' as private or public and appreciated the option to share it with others.

"Collections are good because I can just work on them without worrying about tracking or deadlines." – *P11*

"Collections are a way to organize and save learning modules without extra steps." – *P6*

"Collections was pretty easy, you know. It was user-friendly, and it was easy. But the plan? I don't think it's that user-friendly. It's just too much work." – *P9*

"I like that in collections, I can save everything I need in one spot and add more whenever I want." – *P7*

Recommendations

- When designing a learning content container, explore engineering solutions that enable users to save, organize, and access their learning materials without restrictions, providing greater flexibility and control.

Why I created a concept:

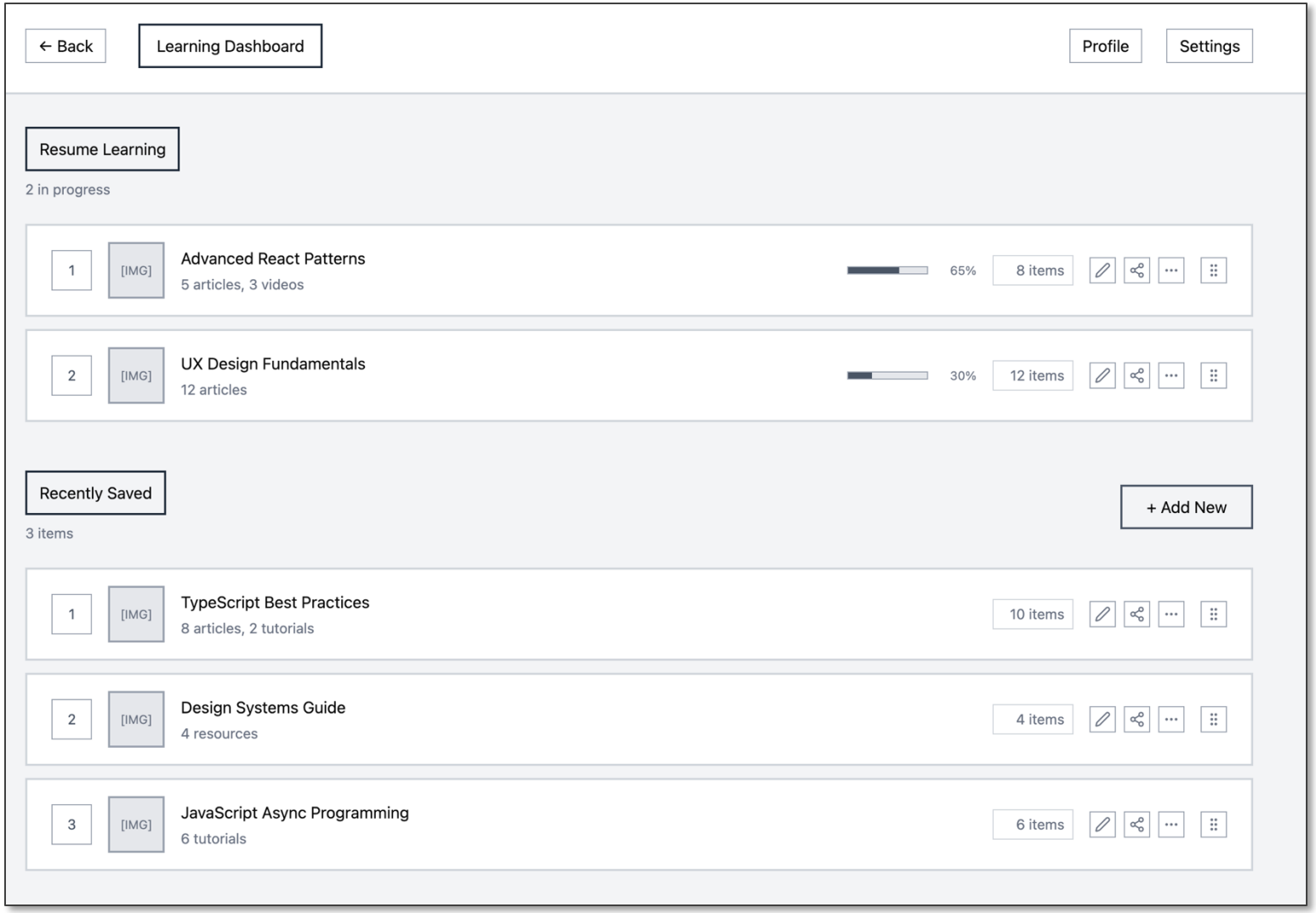
Why a concept was created

- This study surfaced a mismatch between users' mental models and the current way content is stored
- At the time, no consolidated design direction existed
- Stakeholders needed a shared way to visualize what a consolidated experience could look like.

What this artifact represents

- A research-informed concept to visualize how findings could come together
- Not a final design or usability-tested solution
- A tool to support alignment and next-step decision making

Research informed wireframe:



Wrap up:

Impact

- Created alignment across product, design, and engineering
- Helped stakeholders visualize consolidation opportunities
- Informed roadmap discussions around merging Collections and Plans
- Clarified which features must be preserved in any future redesign
- Established a research backed foundation for future concept testing and usability studies

What I wanted to do next

- Collaborate with the design team to translate research findings into a higher-fidelity wireframe that can be used for concept validation
- Usability testing focused on plan creation and content organization
- Heuristic review of new consolidated designs
- Iterative refinement with design and engineering partners

Reflection

In looking back, I would have included users with no prior experience to better capture first-time mental models and early friction. Due to a compressed timeline, I made a tradeoff to focus on experienced users, but in hindsight I would have pushed for a broader sample